Tolga Başak

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Education

Sabanci University | Istanbul, Turkey   *(2020-Expected Jan 2025)*

B.S. in Computer Science, Faculty of Engineering and Natural Sciences

50% Scholarship

Experience

Emperors - Solana NFT Project   *(Feb 2023 - Present)*

Blockchain & Backend Developer

- Built a unique futures trading automation tool that uses moving averages formulas, combined machine learning and graphical algorithms and unique estimation formula.

PixelDinos - Solana NFT Project   *(June 2022 – September 2022)*

Blockchain & Fullstack Developer (Full-time)

- Built an arbitrage trading bot for pairs in Uniswap and Pancakeswap.
- Built a futures trading automation tool for Binance, using self-created algorithms combined with machine learning.
- Built a Metaplex standart candymachinev2 NFT minting website.

Projects

CS310: Mobile Application   *(Feb 2023 - June 2023)*

Co-Founder & Developer & Team Leader

- Leaded a team of three members.
- Leaded the development process of a Java-based mobile application that creates an opportunity for freelancers in order to contact with content consumers in an efficient way for university/high-school students that are seeking for courses or educational job.
- GitHub Link: https://github.com/tolgabasak/cs310

CS306: Nature and Pollution Database   *(Feb 2023 - June 2023)*

Developer & Team Leader

- Leaded a team of six members.
- Developed an SQL database with multiple tables in order to address issues related to nature and pollution that have correlation with CO_2 emission, cleaned ozone percentage, fossil fuel consumption per capita etc.
- GitHub Link: https://github.com/tolgabasak/cs306

CS210: Correlation between Turkey's population growth and energy consumption increase (Data Science)   *(Feb 2023 - June 2023)*

Developer

- Participated a group of six members.
- Built a Python implementation using Machine Learning techniques on Turkey's population and energy consumption data. Python code analyzes the relationship between Turkey's population growth and energy consumption. This analysis was carried out using two main datasets which are "change-energy-consumption.csv" and "population-and-demography.csv".
- GitHub Link: https://github.com/tolgabasak/cs210

Proj201: "4 Wheel Steady State Car Modeling Project"

(Jan 2022 - June 2022)

Researcher

- Completed the Proj201 course as group of three in the department of modelling of the 4 Wheel Steady State Car Project in Motorsports Team at Sabanci University Faculty of Engineering and Natural Sciences.
- Built a MATLAB implementation for testing and verifying the expected motion of the car using integrals and derivatives.

Gender-based Violence Research   *(Sep 2021 - Jan 2022)*

Researcher & Presenter

- Conducted research on Gender-based Violence with a group of four.
- Examined examples of gender-based violence and presented results of the research in order to raise awareness and prevent possible incidents.

Raising Awareness of Pollution   *(Feb 2021 - Jun 2021)*

Composer & Presenter

- Composed a instrumental piece with a group of three including piano and guitar with respect to harmony of nature.
- Published an informative instrumental Music Video in Sabancı University

Civic Involvement Project   *(Jan 2021 - June 2021)*

Member

- Engaged in class discussions to raise awareness about community issues such as racism and animal rights.

NASA Space Apps Challenge   *(Oct 2023)*

Team Leader & Developer

- Built a detailed Moonquake Map using JavaScript, React, Python in order to visualize quakes(between 1969-1979) in 3D interactive format.

Activities

Sabancı E-Sports

(Apr 2022 - Oct 2023)

Board Member

- Participated in meetings and contributed to the society's planning initiatives.
- Launched events in order to bring society together
- Participated in intercollegiate E-Sports tournaments over the country.

Sabancı University Blockchain, Software and Development Department

(Apr 2022 - Present)

Board Member

- Formed and participated a team of developers in order to take part in international Hackathons related to blockchain.
- Launched and participated in multiple events with sponsors to draw attention to blockchain among university students.

SUAK (Sabancı University Search and Rescue), Software Solutions for Natural Disasters

(Sep 2023 - Present)

Board Member

- Lead for building an application for natural disaster situations
- Lead a team of developers to participate natural disaster related hackathons.

Skills

Languages: English (*Advanced*), German (*Intermediate*), Turkish (*Native*)

Computer: Microsoft Office Applications (Word, PowerPoint, Excel), Data Science, Data Structures, Web Development, Mobile App Development, Database Systems, Software Engineering, Solidity, Blockchain, DeFi, Programming Languages, Operating Systems, Anaconda, Spyder, QT, Blender, Node.js, Three.js, React, Cinema 4D, Adobe Creative Cloud Applications (Adobe Lightroom, Adobe Photoshop, Adobe After Effects, etc.), Simulink, MATLAB, Docker, Postman.

Programming Languages: C++, Python, SQL, Java, MATLAB, C, C#, Dart, Solidity (Ethereum, Solana), HTML, CSS.

Interests

Professionally attending competitions in Tennis, Swimming, Esports, Hackathon; interested in Technology, Cryptocurrency, Museums and Art, Ancient History